

CLAIM AMENDMENTS

Please cancel claims 1-7 and add new claims 8-14 as follow:

8. (New) A seismic reinforcement method for existing reinforced concrete structure having openings steel frame for stiffening the RC-structure; fixing the steel frame to an outside of the reinforced concrete structure;

making said steel frame with wide flange section without braces, fixing the steel frame outside of a reinforced concrete column extending in a vertical direction and to an outside of an existing RC-beam extending in a horizontal direction of said building,

the wide flange section column of said portal frame having a bending rigidity roughly equivalent to that of an existing RC-column,

reducing the stress occurring at a connecting part between the existing RC-column and wide flange section column by deforming the wide flange section similar to the existing RC-column under a horizontal load transmitted from the existing RC-beam and/or wide flange section beam during an earthquake, and increasing the strength in the horizontal direction of the combination of the RC-column and the wide flange section column by decreasing the deformation of the RC-column after yielding so as to equalize the range of quasi-elastic deformation of said combination to that of elastic deformation of the wide flange section column.

9. (New) The method according to claim 8, locating said wide flange section column has an H-shape in cross section, and the web close to said RC-column.

10. (New) The method according to claim 8 further comprising fixing tie hoops on the outer surface thereof and increasing the bending rigidity thereof by placing cement mortar or concrete into a space accommodating said tie hoops which is engaged with vertical bars.

11. (New) The method according to claim 8 wherein said wide flange section column is made of a steel of low yield point, reducing yield bending strength only without reduction

of the bending rigidity thereof, for reducing a response stress thereof during the earthquake through plasticization hastened by yielding the combination of the RC-column and the wide flange section column at a bending strength of approximately 2 to 4 times as strong as the existing RC-column.

12. (New) The method according to claim 8 further comprising providing a T-section, in the form of a T in plan view, extending over the structure welding a leg of the T section on an outer surface of the column at a tip thereof for three-dimensionally reinforcing the building by the alignment of the T-section with interior RC-beams or earthquake resisting walls extending perpendicularly to the external walls and being united to the existing RC-columns to be reinforced by the wide flange section columns.

13. (New) The method according to claim 12, wherein; said T-section projects outside said structure as wide as a verandah of each story thereof.

14. (New) The method according to claim 13, further comprising placing additional beams made of high strength fluidized concrete or cement mortar on both sides of said interior RC-beams or RC-beams over the existing earthquake resisting walls for obtaining a desirable bending moment based on post-tension generated by unbonded prestressed steel bars buried in the additional beams for attaining strength in a horizontal direction of said beams.